

VOICE OVER INTERNET PROTOCOL CALL FALLBACK
FOR QUALITY OF SERVICE DEGRADATION

ABSTRACT OF THE DISCLOSURE

5 The invention provides a way to fallback to a PSTN call at any time during
a VoIP call when Quality of Service in a VoIP network falls below some
acceptable level. The PSTN fallback calls can be retrieved "midcall" and rerouted
back over the VoIP network. This provides optimal utilization of VoIP without
sacrificing the quality of the call connection. Calls are cheaper because PSTN
10 fallback calls are only established temporarily for the amount of time that the QoS
problem exists on the VoIP network. Call fallback is conducted in a VoIP
gateway by first receiving an incoming call. A Voice over IP (VoIP) call is
established for the incoming call over the VoIP network. VoIP packets are
encoded from the voice signals in the incoming call and sent over the VoIP
15 network. Quality of service of the VoIP network is monitored during the VoIP
call and a fallback call is setup over a PSTN network at any time during the VoIP
call when the monitored quality of service of the VoIP network degrades. For a
time the voice signals from the incoming call are cross connected to both the
output for the fallback call and the output for the VoIP call. When a destination
20 gateway starts receiving the voice signals from the fallback call, the VoIP call is
dropped. The quality of service on the VoIP network continues to be monitored
during the fallback call. A new VoIP call will be reestablished over the VoIP
network during the fallback call when the quality of service of the VoIP network
improves. Voice from the incoming call is for a time again cross connected to
25 both the fallback call and the new VoIP call. After the destination gateway starts
receiving audio packets again over the new VoIP call, the PSTN fallback call is
terminated.